L 1566-65 EWA(k)/FBD/EWG(r)/EWT(1)/EEC(k)-2/EEC(t)/T/EEC(b)-2/EWP(k)/EWA(m)-2/
[illegible] Pc-4/Pf-4/Pg-4/Peb/Pi-4/P1-4 SCTB/IJP(c) WG/LHB/GG
ACCESSION NR: AP5012566 UR/0181/65/007/005/1506/1516

AUTHOR: Kazarinov, R. F.; Konstantinov, O. V.; Perel', V. I.; Efros, A. L. 72 71 B

TITLE: Electromagnetic theory of the injection laser 21 25

SOURCE: Fizika tverdogo tela, v. 7, no. 5, 1965, 1506-1515

TOPIC TAGS: laser, injection laser, junction laser, semiconductor laser, stimulated emission, radiative recombination, active medium

ABSTRACT: The authors investigated the angular distribution of stimulated emission from a laser diode and calculated the quantum yield coefficient γ (defined [illegible] of emitted power to power generated in the active region by radiative [illegible] Known results for the amplitudes of the field vectors in the n- [illegible] the TE and TM modes of propagation are summarized. These [illegible] then used to derive two different expressions for γ and show that [illegible] the TE and TM modes of propagation γ is given by the same formulas. The [illegible] as a function of the angle in the plane perpendicular to the junction [illegible] a product of two Lorentzian curves. The width of these profiles de- [illegible] penetration depth of the field in the n- and p-regions. If the pro- files are sufficiently far apart, two maxima, corresponding [illegible] from the

Card 1/2

L 45566-65

ACCESSION NR: AP5012566

p- and n-regions, will be present in the angular distribution of the energy flux. Physically, the presence of two peaks is associated with the components of the wave vector in the p- and n-regions which are perpendicular to the plane of the [illegible] It is shown that the angular distance between the peaks determines the [illegible] the active region. Orig. art. has [illegible]

[illegible] Fiziko-tekhnicheskiy institut im. A. F. Ioffe AN SSSR, Leningrad
[illegible]chnical Institute, AN SSSR)

SUBMITTED: 31Dec64 ENCL: 00 SUB CODE: EC

OTHER: 012 ATD PRESS: 4001

Card 2/2

L 00541-66 EWT(1)/T IJP(c)
ACCESSION NR: AP5019221 UR/0056/65/049/001/0097/0106

44,55 44,55 44,55

AUTHORS: Aleksandrov, Ye. B.; Konstantinov, O. V.; Perel', V. I.

21,44,55

TITLE: Optical orientation of atoms in a magnetic field perpendicular to the beam

56 53 B

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 1, 1965, 97-106

TOPIC TAGS: magnetic moment, molecular beam, beam modulation, gas laser

ABSTRACT: The authors investigate theoretically and experimentally a new method of orienting gas atoms in a magnetic field perpendicular to an orienting light beam. This is done by using an alternating magnetic field in addition to a constant one, and modulating the alternating field while maintaining the beam intensity constant. It is shown theoretically that if the alternating field makes a

Card 1/3

ACCESSION NR: AP5019221

small angle with the constant field, then the resultant moment precesses about the constant field and produces large constant components of the magnetic moment in the directions of the magnetic field and of the light. The theory of the process is briefly developed and expressions are derived for the total moment and its projections. To check on the theory, experiments were made on the dc and ac components of the moment projections on the light beam and on the constant field in the vicinity of the first resonance. The experiments were made with a mixture of cesium vapor and argon, using an orienting beam which was circularly polarized and contained only one long-wave component of the resonant doublet. A cesium electrodeless discharge spherical lamp served as the source. The experiment setup is described. The test results are found to be in satisfactory agreement with the theory. Plots were obtained of the depth of modulation of light on the amplitude of the alternating field, of the dc components of the moment against the constant field, and of the resonant broadening by the alternating field. Orig. art.

L 00541-66

ACCESSION NR: AP5019221

3

has: 6 figures and 16 formulas.

ASSOCIATION: Gosudarstvennyy opticheskiy institut im. S. I. Vavilova (State Optical Institute) 44,55

SUBMITTED: 16Feb65 ENCL: 00 SUB CODE: OP

NR REF SOV: 002 OTHER: 004

mlr

Card 3/3

L 46829-66 EWT(1)/T IJP(c) AT

ACC NR: AP6015465 SOURCE CODE: UR/0181/66/008/005/1467/1478

4/

AUTHOR: Konstantinov, O. V.; Efros, A. L.

8

ORG: Physics Engineering Institute im. A. F. Ioffe, AN SSSR, Leningrad (Fiziko-tekhnicheskiy institut AN SSSR)

TITLE: A strong injection in a nondegenerate p-n transition

SOURCE: Fizika tverdogo tela, v. 8, no. 5, 1966, 1467-1478

TOPIC TAGS: pn transition, hole injection, nondegenerate transition, volt ampere characteristic

ABSTRACT: The authors discuss the approximate solution obtained by them to describe the entire process of concentration of injected holes. This solution holds true when the drift length is substantially greater than the diffusion length. The problem of the voltage drop in the transition ($\delta\psi$) itself is also discussed. The solution obtained is more accurate that the drift approximation due to C. Herring (Bell Syst. Tech. J., 28, 401, 1949). A relationship is found between the injected concentration and the current and the volt-ampere characteristic of such a diode. In conclusion the authors wish to express their sincere gratitude to B. V.

Card 1/2

L 41599-66 EWT(l)/T IJP(c) AT

ACC NR: AP6018552 SOURCE CODE: UR/0181/66/008/006/1866/1877

61
59
B

AUTHOR: Konstantinov, O. V.; Tsarenkov, G. V.

ORG: Physicotechnical Institute im. A. F. Ioffe, AN SSSR, Leningrad (Fiziko-tekhnicheskiy institut AN SSSR)

TITLE: Recombination waves in a bounded sample

SOURCE: Fizika tverdogo tela, v. 8, no. 6, 1966, 1866-1877

TOPIC TAGS: electron recombination, semiconductor carrier, carrier density, minority carrier, semiconductor plasma

ABSTRACT: This is an extension of earlier work by one of the authors (Konstantinov, with V. I. Perel', FTT v. 6, 3365, 1964) dealing with the natural recombination waves produced in semiconductors with two types of current carriers upon deviation of the free-carrier density from equilibrium. Whereas the earlier study was devoted to unbounded semiconductors or to annular semiconductors without contacts, the present paper deals with samples of finite lengths and with ohmic contacts (ohmic in the sense that any deviation of the carrier density from equilibrium is equal to zero). It is shown that when the carrier drift in a constant electric field exceeds a certain critical value, corresponding to a certain critical field, the natural oscillations are produced; formulas are given for the critical field and for the critical frequency. If the sample length exceeds the diffusion length of the minority carriers, a second class of oscillations is produced, called almost-natural oscillations, which do not

Card 1/2

Card 2/2

KONSTANTINOV, O.Ya., insh.

New high-duty "corn-type" cutters. Mashinostroitel' no.1:37-40 Ja '59. (MIRA 12:2)

(Metal-cutting tools)

25(2)

SOV/117-59-3-6/37

AUTHOR: Konstantinov, O.Ya., Engineer

TITLE: The Modernization of Face Grinding Machines (Modernizatsiya ploskoshlifoval'nykh stankov)

PERIODICAL: Mashinostroitel', 1959, Nr 3, pp 9 - 12 (USSR)

ABSTRACT: There are about 50 types of face grinders in use in the USSR, of home and foreign make, the horizontal-spindle "SK-371" and "371-M" grinders of the Moscow, Vitebsk and Zlatoust machine tool plants being the most widely used. The modernization described concerns the design of the spindle assembly in the last mentioned grinders, i.e. of the element that is mainly responsible for the accuracy and the finish of the ground work. The old design (Figure 1) made the adjustment of the spindle bearing extremely difficult. The alignment of the front and the rear spindle support was also very difficult, and the assembling and dismantling of the unit was unduly complex. The best solution was the spindle

Card 1/2

The Modernization of Face Grinding Machines

assembly design (Figure 2) with ball bearings, devised by the locksmith, B.T. Gel'berg, of the Leningradskiy zavod poligraficheskikh mashin - "Lenpoligrafmash" (the Leningrad Printing Machine Plant) that was tested at the chair "Technology of Machine-building" of the Leningradskiy inzhenerno-ekonomicheskiy institut (Leningrad Engineering-Economics Institute). The article also deals with the causes of surface waviness occurring in the face grinders "SK-371". It was revealed that the real cause was the insufficient removal of clogged and blunted abrasive material from the surface of the grinding wheel while setting it. It was observed that the plants set grinding wheels by removing only 0.05 to 0.3 mm from the surface, and as a result spots are left on the circumference of the wheel which develop to spots of different hardness or different cutting capacity. These leave regularly spaced waves on the work surface. There are 4 sets of drawings, 1 set of graphs and 1 set of photographs.

KONSTANTINOV, O.Ya., inzh.

Fine straightening of wheels for flat-surface grinding. Trudy LIBI no.3:32-46 '60. (MIRA 13:10)
(Grinding and polishing)

KONSTANTINOV, O.Ya., inzh.

Conditions of fine flat-surface grinding of parts with the wheel periphery. Trudy LMBI no.3:47-57 '60. (MIRA 13:10)
(Grinding and polishing)

KONSTANTINOV G.YA.

PHASE I BOOK EXPLOITATION SOV/4501

Leningrad. Inzhenerno-ekonomicheskiy institut

Chistovaya obrabotka i sostoyaniye obrabotannoy poverkhnosti (Finishing Operations and Surface Roughness) [Leningrad] Izd-vo Leningr. univ-ta, 1960. 268 p. (Series: Its: Trudy, vyp. 30) 1,825 copies printed.

Ed. (Title page): A.A. Matalin, Professor; Ed. (Inside book): G.M. Aron; Tech. Ed.: S.D. Vodolagina.

PURPOSE: This collection of articles is intended for technical personnel in the machine-building industry and for students in schools of higher technical education.

COVERAGE: The collection contains articles on the problems of developing methods for mechanical machining (such as grinding and superfinishing with strain hardening, roll burnishing, fine grinding, etc.) which would serve to increase the life of machine parts exposed to friction and wear, and thereby insure high productivity and economy. Methods for determining residual stresses (only in macrostresses and microstresses) are discussed in detail. Also considered are the possibility

Card 1/4

Card 2/4

AVAILABLE: Library of Congress

VK/wrc/gmp
11-16-60

KONSTANTINOV, O. Ya. Cand Tech Sci -- "Study of the process of surface grinding for high class purity and precision." Len, 1961 (Min of Higher and Secondary Specialized Education RSFSR. Len Inst of Precision Mechanics and Optics).

(KL, 4-61, 197)

S/514/61/000/005/012/014
I007/I207

Author: Konstantinov, O.Ya.

TITLE: Surface grinding of components requiring a high degree of surface finish and accuracy

SOURCE: Akademiya nauk. Komissiya po tekhnologii mashinostroyeniya. Semina po kachestvu poverkhnosti. Trudy. no.5. 1961. Kachestvo poverkhnosti detaley mashin; metody i pribory, uprochneniye metallov, tekhnologiya mashinostroyeniya, 321-326

TEXT: In order to study the processes of peripheral grinding carried out by horizontal surface-grinders, in view of the increasing requirements for accuracy and surface quality, the department for "Machine-building Technology" of the ЛЭИЕМ (LEIEI) carried out a series of investigations the results of which are amply reported Tests were conducted on a re-designed and improved surface-grinder of the 271EI type produced by the Vitebsk plant. The conditions of truing and dressing the abrassive wheel were studied, the grinding conditions for the obtaining of high surface finish were analyzed, and the accuracy of surface-finish grinding were investigated. As was found, truing coditions for the grinding wheel are essential in obtaining

Card 1/2

KONSTANTINOV, O.Ya.

Grinding of surfaces by high classes of smoothness and precision. Trudy Sem.po kach.poverkh. no.5:321-326 '61. (MIRA 15:10)
(Grinding and polishing)

KONSTANTINOV, O.Ya., kand. tekhn. nauk

Magnetic plate with permanent ceramic magnets. Mashinostroitel' no.9:26-27 S '63. (MIRA 16:10)

(Magnets)

KONSTANTINOV, Oleg Yakovlevich; SEMENENKO, P.A., red.

[Magnetic and electromagnetic machine-tool attachments] Magnitnye i elektromagnitnye stanochnye prisposobleniia. Leningrad, 1964. 32 p. (MIRA 17:9)

KONSTANTINOV, O.Ya., kand. tekhn. nauk

Thermal deformations and rigidity of electromagnetic attachments.
Mashinostroitel' no.2:25-29 F '65. (MIRA 18:3)

BLYUMBERG, V.A., kand. tekhn. nauk; KONSTANTINOV, O.Ya.

Ways for improving machine-tool attachments. Mashinostroitel' no.6:
22-25 Je '65. (MIRA 18:7)

KONSTANTINOV, P.

Single-duct ventilating installations are needed. Muk.-elev.prom. 24 no.2:30 F '58. (MIRA 11:4)

1. Zamestitel' nachal'nika Molodechnenskogo oblastnogo upravleniya khleboproduktov.
(Ventilation) (Grain--Storage)

KONSTANTINOV P.

BULGARIA / Diseases in Animals. Diseases Caused by Protozoa R

Abs Jour: Ref Zhur-Biologiya, No 16, 1958, 74235

Author : Konstantinov, Petor; Denev, Iordan

Inst : Not given

Title : Investigations on the Use of Penicillin During Coccidiosis in Young Chicks

Orig Pub: Zhivotnovodstvo i vet. delo, 1957, 11, No 3, 24-28

Abstract: Experiments were conducted on three farms. For six days, 2000 unis of penicillin (I) dissolved in distilled water was given daily with food. All of the young chicks that received I recovered and in comparison with the controls gained significantly in weight. Treatment of 3,210 young chicks in field

Card 1/2

BULGARIA / Diseases in Animals. Diseases Caused by Protozoa R

Abs Jour: Ref Zhur-Biologiya, No 16, 1958, 74235

conditions lead to cessation of the dease. An experiment in the prophylactic administration of I was conducted on three farms with 4,500 young chicks. At one farm, 600 units of I was given to the young chicks daily from the moment of hatching; in another--every day for 20 days, beginning when they were 10 days old; in the third--from the moment they hatched for 40 days with a five day interval. At the first two farms, the disease did not appear clinically and the young chicks developed well, although separate oocysts were sometimes detected in their stool; in the third--there were cases of murrain in the young chicks. --L. P. Menshikov

Card 2/2

BULGARIA/Diseases of Farm Animals - Diseases Caused by Protozoa R

Abs Jour : Ref Zhur Biol., No 5, 1959, 21431

Author : Pishev, D., Konstantinov, P., Katerinov, Y.
Inst : -
Title : Studies on Trichomoniasis of Cattle in Bulgaria

Orig Pub : Selskostop. mia"l, 1958, 3, No 1, 49-56

Abstract : As a result of investigation of 4195 cows at trichomoniasis infested farms and of 102 artificially infected cows, the correlation of trichomoniasis on the one hand and sterlity and abortions on the other was demonstrated. Twenty to 65 percent of cows affected with trichomoniasis were sterile, 0.3-40 percent (3.8 percent on the average) of cows aborted. Most abortions occurred on farms where the disease had appeared a short time previously. In all of the aborted cows and in 11-100 percent (64 percent on the average) of the sterile cows inflammatory processes were found in the sex apparatus; trichomonades, however,

Card 1/2

1. KONSTANTINOV, P.

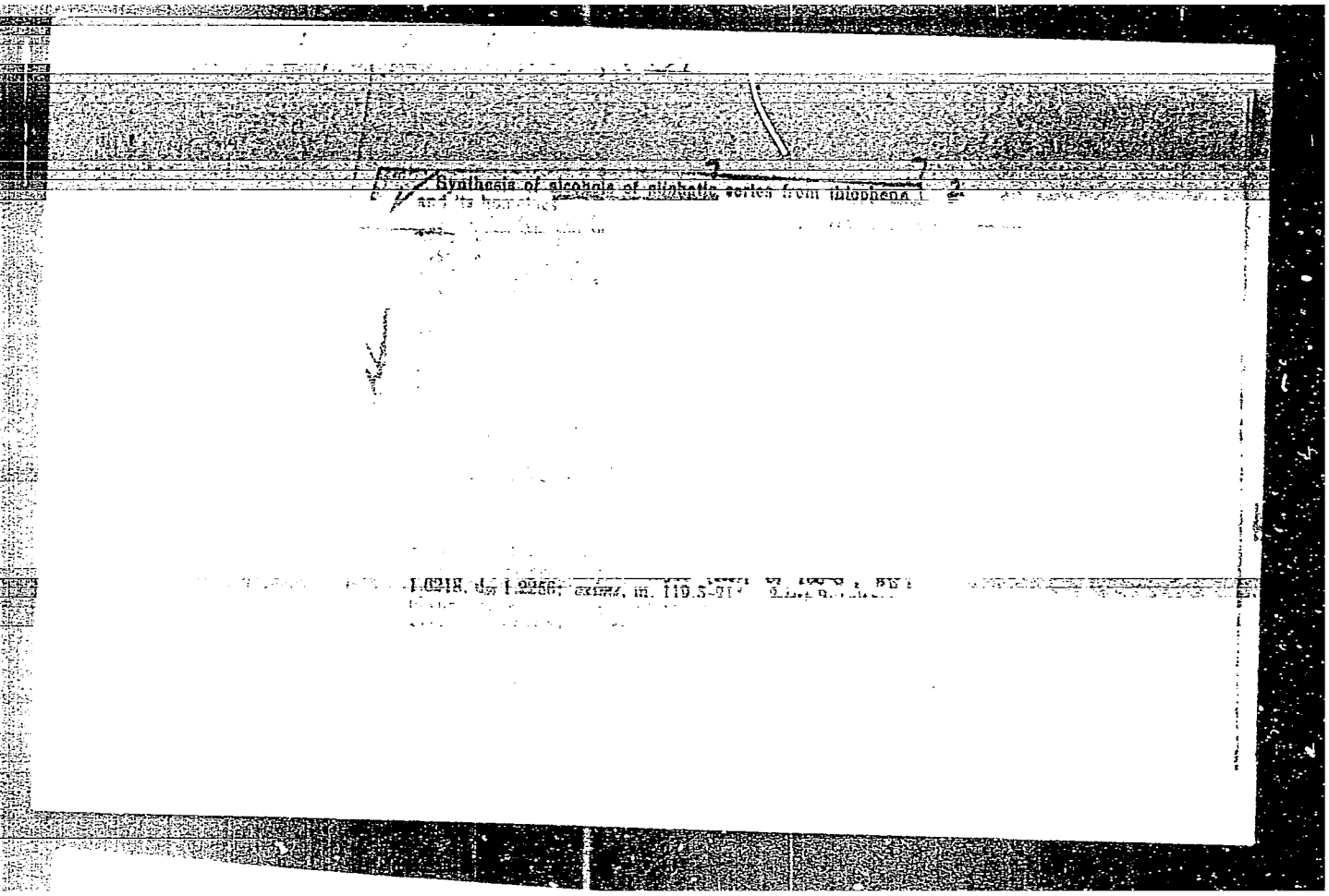
2. USSR (600)

4. Ice Cream Freezers

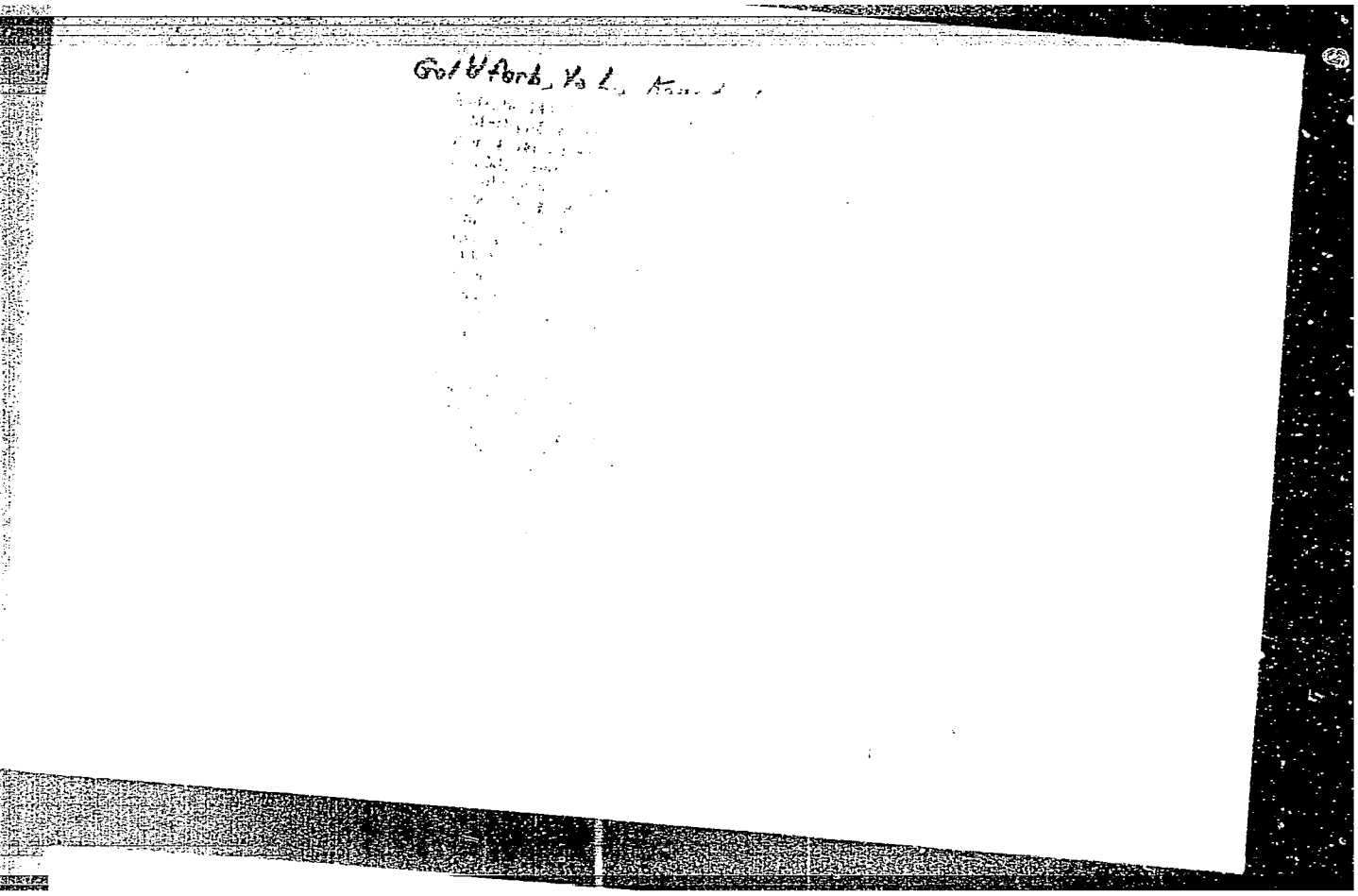
7. Method of cleaning up brine in the "Eskimo" generator. Khol. tekh. 29 no. 3, 1952

9. **Monthly List of Russian Accessions**, Library of Congress, January 1953. Unclassified.

Sulfonation of *tert*-butyl [illegible]



Synthesis of alcohols of aliphatic series from thiophene



KONSTANTINOV, P. A. Cand Chem Sci -- (diss) "Effect of basic nickel upon aldehydes, ketones, ethers, and acetals of the thiophene series." Mos, 1957. (Acad Sci USSR. Inst of Organic Chemistry im N. D. Zelinskiy), 120 copies (KL, 6-58, 99)

KONSTANTINOV, P.A.

AUTHORS: Gol'dfarb, Ya. L., and Konstantinov, P. A. 62-1-15/21

TITLE: The Structure of Products Obtained from the Acylation and Formylation of 2-Methyl-5-Tertiary Butyl Thiophene and 2,5-Di-Tri-butyl Thiophene (O stroyenii produktov atsilirovaniya i formilirovaniya 2-metil-5-tret.butiltiofena i 2,5-di-tret.butiltiofena).

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Khimicheskikh Nauk, 1957, No. 1, pp. 112-117 (U.S.S.R.)

ABSTRACT: Experiments showed that formylation, acetylation and also bromination of 2-methyl-5-tertiary butyl thiophene force the new substitute into position 3. During the acetylation of 2,5-di-tri-butyl thiophene in the presence of stannicchloride, the migration of the tertiary butyl group has not been observed. The possibility of obtaining thiophencarboxylic acids, substituted in alpha position with alkyl radicals (methyl, tertiary butyl) by simultaneous reaction of iodine

Card 1/2

The Structure of Products Obtained from the Acylation and Formylation of 2-Methyl-5-Tertiary Butyl Thiophene and 2,5-Di-Tri-butyl Thiophene

and pyridine and consequent cleavage (with alkali) of the pyridine salt, is explained. The products obtained are listed as: 2-methyl -5-tert.butyl -3-thiophenecarboxylic acid, 2,5-di-tri-butyl-3-thiophenecarboxylic acid and 2-methyl-5-tert. butyl-3-bromothiophene.

There are 14 references, of which 3 are Slavic.

ASSOCIATION: Academy of Sciences of the USSR, Institute of Organic Chemistry imeni N. D. Zelinskiy

PRESENTED BY:

SUBMITTED February 9, 1956

AVAILABLE: Library of Congress

Card 2/2

KONSTANTINOV, P.A.

5(3)

AUTHORS: Gol'dfarb, Ya. L., Konstantinov, P. A. SOV/62-59-1-2o/38

TITLE: On the Effect of Raney Nickel on Ketones and Acetals of the Thiophene Series (O deystvii nikelya Reneya na ketony i atsetali ryada tiofena)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 1, pp 121 - 129 (USSR)

ABSTRACT: In the present paper the authors investigated the influence exercised by the structure of some carbonyl-containing compounds of the thiophene series as well as conditions for the reduction of the carbonyl group during hydrogenolysis in the presence of Raney Nickel as a catalyst. The authors tried to explain the possibility of using the factors mentioned for the maintenance of this function in hydrogenolysis. Observation of hydrogenolysis of 2—n—butyro thienone (I) under various conditions have shown that: 1) temperature decrease during treatment with skeleton nickel within a range of 80 to -10° favors a higher yield of octanone-4 (II) and accordingly decreases the yield of octanol-4 (III); 2)Prolongation of hydrogenolysis from 1 to 14 hours did not

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Inst. Org. Chem. im N.D. Zelinskiy, AS USSR

change considerably the yield of the product; 3) Addition of acetic acid to the primary mixture for neutralizing the alkali collected by nickel also does not change considerably the ratio octanone:octanol. The n-butyl-tertiary butylketone is formed during the reducing desulfurization of tert-butyl-2-thienyl ketone by Raney nickel synthesized according to Adkins and Billica. Under similar conditions, a mixture of aliphatic ketone and secondary alcohol is produced by ketones of the n-butyro thienone type. In view of the fact that Raney nickel is capable of splitting the bonds between carbon atoms and others it was difficult to predict its effect on acetals. It was stated that ethylene acetals of aliphatic aldehydes are synthesized by hydrogenolysis of acetals. This may serve as a preparative method in such cases where the synthesis of the latter by other methods is complicated. There are 18 references, 4 of which are Soviet.

Card 2/3

KONSTANTINOV, P. A.

5.3610

AUTHORS: Santalova, N. I. (Deceased), Konstantinov, P. A., Gol'dfarb, Ya. L.

80003
S/020/60/131/05/033/069
B011/B117

TITLE: Reducing Desulfurization of Some Diamines of the Thiophene Series

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 131, Nr 5, pp 1102-1105 (USSR)

TEXT: The authors wished to extend the reducing desulfurization method to the di-tertiary amines of the thiophene series. Thus, higher alkylene diamines can be obtained, which, in turn, could be utilized to synthetize the bis-ammonium salts with a potential curare-like effect. As compared to decamethonium, the halogen alkylates of the diamines IV and IVa would form a new type of such compounds. They are ramified in the center of the chain. Such ramifications exert an influence on the activity of some substances with a curare-like effect (Ref 4). The authors used 2,2-bis(2-thienyl)-butane which is easily formed from thiophene and methyl ethyl ketone as the starting material. By chloromethylation, the bis-chloro-methyl derivative (I) was obtained. This derivative was used in the "raw" state, since it decomposes to a considerable degree when subjected to vacuum distillation. When hexamethylene tetramine is reacted with I, the corresponding salt, and from this, the diamine II is obtained in the ordinary way. Hydrogenolysis with Raney nickel yielded only mixtures distillable in a too broad range. Therefore, skeleton cobalt was used by the authors, although it is

Card 1/2

L 10666-63 EPR/EWP(j)/EPF(c)/EWI(m)/BDS--ASD--Pr-4/Pc-4/Ps-4--RM/WW 71
S/079/63/033/004/005/010 69

AUTHOR: Konstantinov, P.A., Shupik, R.I.

TITLE: Action of Reney nickel on silicoorganic derivatives of thiophene

PERIODICAL: Zhurnal obshchey khimii, v. 33, no. 4, 1963, 1251-1255

TEXT: The action of halogenoalkylsilanes on lithium derivatives of thiophene and its homologs produces silicoorganic derivatives of thiophene: 2-methyl-5-trimethylsilylthiophene, 2,5-ditrimethylsilylthiophene, dimethyldi-(2 thienyl)silane, diethyldi-(2-thienyl)silane, 5-trimethylsilyl-2-thiophene aldehyde and β-(5-trimethylsilyl-2-thienyl)ethanol. Upon the action of Reney nickel on silicoorganic derivatives of thiophene the C-S bond is broken and the corresponding derivatives of the

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L 10666-63

S/079/63/033/004/005/010

Action of Reney nickel on...

aliphatic series are formed. The introduction of atoms of silicon into the α-position of the thiophene ring increases the stability of the ring with respect to Reney nickel. Silico-organic compounds of the aliphatic series were obtained: trimethylpentylsilane, 1,4-bis(trimethylsilyl)butane, dimethyl-dibutylsilane, and 5-trimethylsilylpentanol-1. There is 1 table of characteristics of the alkyl thienylsilanes.

ASSOCIATION: Moskovskiy fiziko-technicheskiy institut (Moscow Physics-Engineering Institute)

SUBMITTED: May 18, 1962

kes
Card 2/2

ZHUKOV-VEREZHNIKOV, N.N.; VOLKOV, M.N.; RYBAKOV, N.I.; SAKSONOV, P.P.; KOZLOV, V.A.; KONSTANTINOV, P.A.; ANTIPOV, V.V.; DOBROV, N.N.; ANISKIN, Ye.D.

New ways of studying chemical protection against genetic changes. Probl. kosm. biol. 4:445-450 '65. (MIRA 18:9)

L 11657-66 EWT(d)/FSS-2

ACC NR: AP6000790 SOURCE CODE: UR/0106/65/000/009/0043/0049

AUTHOR: Konstantinov, P. A.

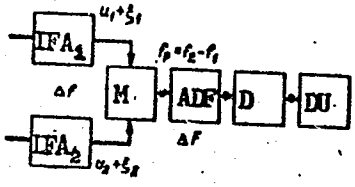
ORG: none

TITLE: Two-channel communication system with stable difference frequency and amplitude keying

SOURCE: Elektrosvyaz', no. 9, 1965, 43-49

TOPIC TAGS: signal noise separation, radio communication system

ABSTRACT: This system of radio communication is considered: a signal sent by a two-frequency transmitter (on both frequencies) is received by two receivers whose IF amplifiers (see figure) combine their outputs in a multiplier M (mixer); next, amplifier-and-difference-frequency-filter ADF isolates the difference frequency and sends it to detector D and decision unit DU. If the difference-frequency stability is much higher than that of transmitter frequencies, the ADF passband can be made



Card 1/2

UDC: 621.396.629

L 11657-66
ACC NR: AP6000790

0

much narrower than those of IFA's; this results in lower output noise. Components of IFA signal and noise are analyzed, their dispersions are determined, and the final output dispersions with and without signal are found. A true power gain obtainable with the above two-channel system, as compared to the conventional single-channel system, is given as: $Q \geqslant 0.5\,\Delta f/\Delta F$, where Δf and ΔF are the IFA and ADF pass-bands, respectively. Orig. art. has: 3 figures and 44 formulas.

SUB CODE: 17 / SUBM DATE: 19Apr64 / ORIG REF: 002 / OTH REF: 001

Card 2/2

L 14295-66 EWT(m)/EPF(n)-2 GG/RD

ACC NR: AT6003878 SOURCE CODE: UR/2865/65/004/000/0445/0450

AUTHOR: Zhukov-Verezhnikov, N. N.; Volkov, M. N.; Rybakov, N. I.; Saksonov, P. P.; Kozlov, V. A.; Konstantinov, P. A.; Antipov, V. V.; Dobrov, N. N.; Aniskin, Ye. D.

ORG: none

19,44,55

TITLE: New ways of studying chemical protection against genetic changes

SOURCE: AN SSSR. Otdeleniye biologicheskikh nauk. Problemy kosmicheskoy biologii, v. 4, 1965, 445-450

TOPIC TAGS: bacteria, x ray irradiation, bacterial genetics, chemical agent

ABSTRACT: Aminothiols and some pyrimidine analogs were tested for their ability to block development of infectious phage from prophage after induction of E. coli K-12 (λ) with x-rays. Doses with a previously established non-toxic effect (0.05% concentration) were used. The desired chemical preparation was added to a bacterial culture diluted in a physiological medium. Experimental and control samples were subjected to x-ray irradiation (dose, 15,000 r) and then cultured on agar. The number of induced phage particles in irradiated samples with and without each preparation was then compared. 2-Mercaptopropylamine hydrochloride was

Card 1/2

L 14295-66

ACC NR: AT6003878

most effective; cultures treated with it produced 119 times fewer phage particles than control samples. Other good inhibitors of induced phage formation were 2-(gamma-aminopropyl) disulfide dihydrobromide, sodium diethyldithiocarbamate and ammonium dithiocarbamate, which reduced phage production 76.3—70.1 times. Less effective were the salts of β-mercaptoethylamine tested: 2-mercaptoethylamine hydrobromide, 2-mercaptoethylamine disulfide hydrochloride, 2-mercaptoethylamine hydroiodide, and 2-mercaptoethylamine hydrochloride.

The experimental data show the essential connection between the chemical structure of the tested preparations and their ability to block the development of infectious phage. The antigenetic effect of β-mercaptoethylamine preparations is determined by their acid radicals as well as by their base. It may be possible to obtain even more effective preparations of this compound by forming salts with other acids. The failure of 3-β-aminoethylisothiuronium hydrobromide to produce an antigenetic effect is especially interesting because in previous experiments this compound decreased the death rate of animals subjected to a lethal radiation dose by 70-100%. Orig. art. has: 1 table. [ATD PRESS: 4091-F]

SUB CODE: 06 / SUBM DATE: none / ORIG REF: 013 / OTH REF: 003

Card 2/2

L 14294-66

ACC NR: AT6003881

tained in the second generation. However, preparation P-46 completely removed the injurious radiation effect in that generation. Experimental data indicate the possibility of partially or completely removing the depressing effect of β-radiation on plants with the help of physiologically active compounds. Orig. art. has: 4 tables. [ATD PRESS: 4091-F]

SUB CODE: 06 / SUBM DATE: none / ORIG REF: 004 / OTH REF: 005

QC

Card 3/3

KONSTANTINOV, P.A.

Two-channel communication system with stable difference frequency and amplitude keying. Elektrosviaz' 19 no.9:43-49 S '65.
(MIRA 18:9)

6.4700

31198
S/106/61/000/012/002/010
A055/A127

AUTHOR: Konstantinov, P. A.

TITLE: On the expediency of using multifrequency communication systems

PERIODICAL: Elektrosvyaz', no. 12, 1961, 13 - 18

TEXT: The author examines the noise immunity of multifrequency communication systems with automatic reception. The number of possible combinations with a binary code and with an m-base code is:

$$N_2 = 2^{n_2} \quad (1)$$

and

$$N_m = m^{n_m} \quad (2)$$

respectively. Expressing by P_m and P_2, respectively, the probability of the elementary signal distortion, the probability of correct reception of all the n_m elementary signals composing a code combination, i. e. the probability of correct reception of the order, will be:

$$Q_{km} = (1 - P_m)^{n_m}, \quad (4)$$

Card 1/5

and the probability of the distortion of the order (assuming that $P_m \ll 1$) will be:

$$P_{km} = n_m P_m, \quad (5)$$

if for m = 2:

$$P_{k2} = n_2 P_2. \quad (6)$$

The relative probability of distortion is

$$\frac{P_{km}}{P_{k2}} = \frac{1}{\log_2 m} \frac{P_m}{P_2}. \quad (7)$$

The author determines the relative probability of distortion in the case of multifrequency communication systems where code combinations are composed of successive sendings (oscillations of one of the m frequencies can correspond to each of these sendings). It is assumed that the receiver contains frequency discriminators preceded by filters and followed by comparing devices. Introducing the expressions $\alpha_m = A/\sigma_m$ and $\alpha_2 = A/\sigma_2$ for the signal-to-interference ratio, the author finds, for the case analyzed by L. M. Fink [Abstracter's note: No explanation given]: 1) for a low frequency stability ($\alpha_m = \alpha_2$):

On the expediency of using multifrequency...

$$\frac{P_{km}}{P_{k2}} = \frac{2(m-1)!}{\log_2 m} \sum_{i=1}^{m-1} \frac{(-1)^{i+1}}{(i+1)!(m-i+1)!} \exp\left[\frac{\alpha_2^2(1-1)}{4(1+1)}\right]. \quad (14)$$

2) for a high frequency stability ($\alpha_m = \alpha_2 \sqrt{\log_2 m}$):

$$\frac{P_{km}}{P_{k2}} = \frac{2(m-1)!}{\log_2 m} \sum_{i=1}^{m-1} \frac{(-1)^{i+1}}{(i+1)!(m-i-1)!} \exp\left[\frac{\alpha_2^2[1+1(1-2\log_2 m)]}{4(i+1)}\right]. \quad (15)$$

These formulae correspond, however, to two extreme cases, i.e. when the receiver pass-band is determined entirely either by the frequency instability ($\alpha_m = \alpha_2 =$ const.) or by the duration of the elementary signal ($\alpha_m = \alpha_2 \sqrt{\log_2 m}$). It is interesting to examine also the intermediate case and to find the dependence of the relative probability of distortion on the frequency stability. Expressing by τ_m and τ_2 the duration of elementary signals and assuming that an increase of m brings about an increase of the signal duration according to the relationship:

$$\tau_m = \tau_2 \log_2 m, \quad (8)$$

whereas the pass-band of the separation filters is narrowed q times, the author

On the expediency of using multifrequency...

finds:

$$\frac{P_{km}}{P_{k2}} = \frac{m-1}{\log_2 m} \exp\left[\frac{\alpha_2^2}{4}(1-q)\right]. \qquad (19)$$

In order to estimate the influence of the frequency instability on the probability of distortion, he assumes that the filter band is:

$$\Delta f_{filt.} = \Delta f_{\tau} + \Delta f_{instab.}$$

Introducing Δf_{instab}, or rather, the expression:

$$b = \Delta f_{instab}\, \tau_2$$

into formula (19), he finally obtains:

$$\frac{P_{km}}{P_{k2}} = \frac{m-1}{\log_2 m} \exp\left[\frac{\alpha_2^2(1-\log_2 m)}{4(1+b\log_2 m)}\right]. \qquad (21)$$

This formula permits him to investigate the dependence of the probability of dis-

Card 4/5

29586
S/108/61/016/011/002/007
D201/D304

6,9800
6.4800

AUTHOR: Konstantinov, P.A., Member of the Society

TITLE: The interference-killing features of a communication system with tone manipulation at an ideal reception

PERIODICAL: Radiotekhnika, v. 16, no. 11, 1961, 18 - 25

TEXT: An analysis is given of the interference-killing features of various communication systems with tone manipulation when two signals having different amplitudes are fully detectable. An ideal receiver is stated to be one receiving the minimum probability of signal distortion. For two values of signal $S_1(t)$ and $S_2(t)$ and equal energies, the ideal receiver detects S_1 when the ratio of probability functions satisfies condition

$$\frac{L(S_1)}{L(S_2)} = e^{\frac{1}{N_0}\int_0^\tau x(t)[S_1(t)-S_2(t)]dt} \geqslant 1 \qquad (1)$$

Card 1/5

The interference-killing features ...

is the correlation and E_o is the signal energy and $\Phi(x)$ the probability integral. 1) Communication system FM-AM. This consists of frequency manipulation of the sub-carrier and of amplitude modulation of the carrier. For this case

$$R_s = \frac{1}{1 + \frac{m^2}{2}}, \qquad (8)$$

which for $m = 1$ becomes $R_s = 2/3$ and Eq. (3) becomes

$$P = 0.5 - \Phi\left(\sqrt{\frac{E_o}{6N_o}}\right). \qquad (9)$$

For FM only this equation is

$$P = 0.5 - \Phi\left(\sqrt{\frac{E}{2N_o}}\right). \qquad (10)$$

Comparing the two, shows that the power gain of FM-AN is 3 times greater. 2) PM-AM system. From it P is derived as

Card 3/5

The interference-killing features ...

$$P = 0.5 - \Phi\left(\sqrt{\frac{E_0}{3N_0}}\right) \qquad (13)$$

which shows an improvement on FM-AM system. 3) FM-FM system. R_s for this system is derived as

$$R_s = J_0^2(\beta) \qquad (20)$$

where β is the modulation index. For large β, therefore, the probability of signal distortion will be determined by Eq. (10) as for the pure FM system. 4) PM-FM system. For this R_s is derived as

$$R_s = J_0(2\beta). \qquad (23)$$

For a given modulation index, and using (23) and (3), the probability of signal distortion may be determined. It will be smallest for β corresponding to the negative values of the Bessel function $J_0(2\beta)$. Condition (2) permits the design of the ideal receiver for the above systems. It consists of two heterodynes, coherent with the signals, two multipliers and two integrators. The integrated

The interference-killing features ...

effects of both channels are read out and depending on the sign of the difference obtained, a threshold arrangement records the positive or negative signal. There are 1 figure and 3 Soviet-bloc references.

ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi im. A.S. Popova (Scientific and Technical Society of Radio Engineering and Electrical Communication im. A.S. Popov) [Abstractor's note: Name of Association taken from 1st page of journal].

SUBMITTED: November 3, 1960

Card 5/5

L 65149-65 EWT(1)/EEC(k)-2/T/EWA(h) IJP(c)

ACCESSION NR: AP5021571

UR/0286/65/000/013/0044/0044
621.382.232

AUTHOR: Konstantinov, P. B. 44

TITLE: Tunnel diode. Class 21, No. 172404 25,44

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 13, 1965, 44

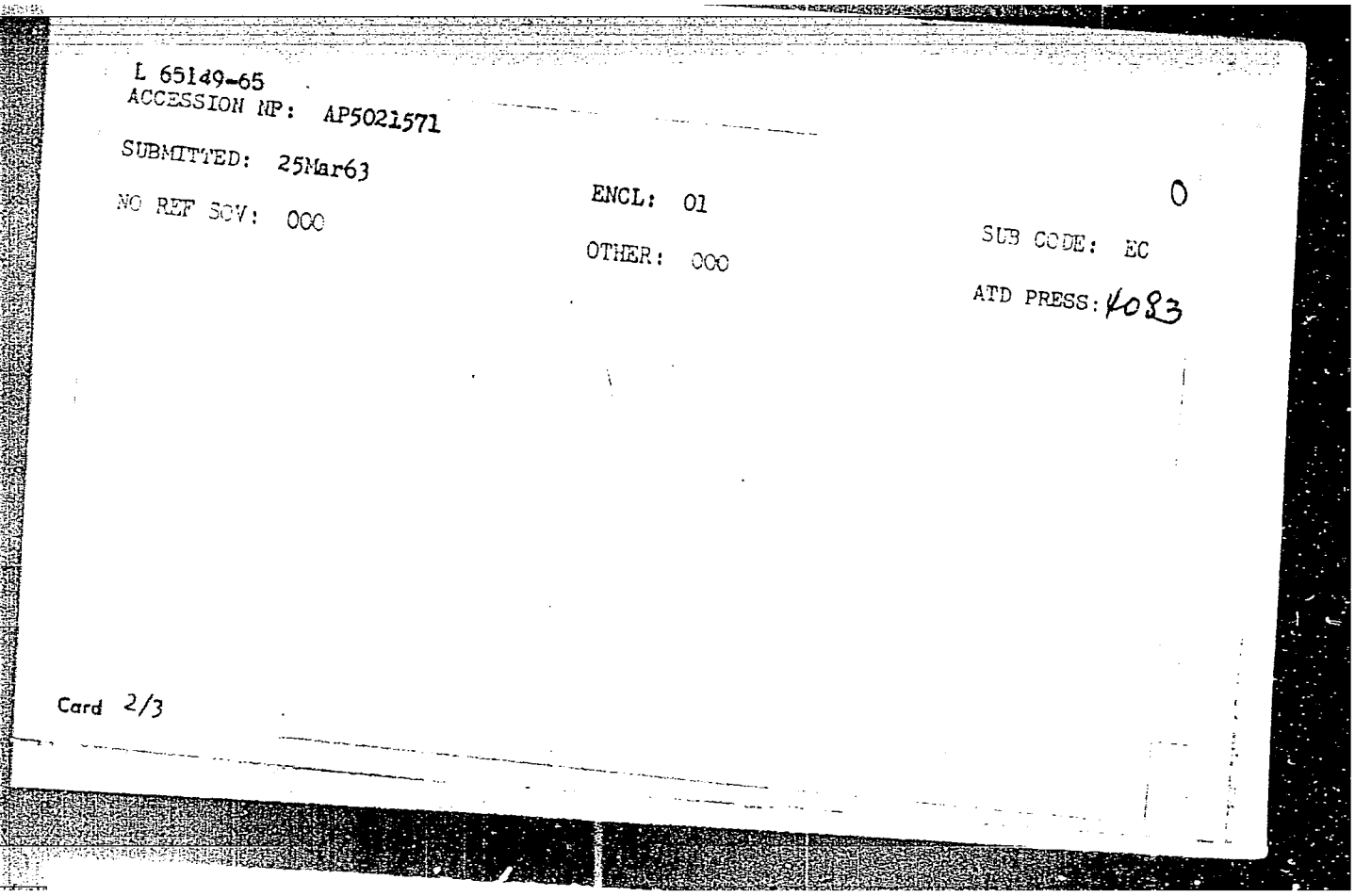
24
B

TOPIC TAGS: tunnel diode

ABSTRACT: This Author Certificate introduces a tunnel diode, e.g., on a germanium base, enclosed in a ceramic shell to which are fused the upper and lower contact leads of the device (with a cap soldered to the upper lead). To increase the frequency limit, to decrease the inductance of the case, and to simplify the production technology, the upper lead of the device is drawn at an angle, e.g., 90° (see Fig. 1 of the Enclosure). A crystal with a variable profile is created between the side face of the crystal and the lug of the upper lead. The electrode material, forming a p-n junction at the side face of the crystal, is at the same time a contact with the lug of the upper lead of the device. Orig. art. has: 1 figure.

ASSOCIATION: none

Card 1/2 [04]



L 65149-65
ACCESSION NP: AP5021571

SUBMITTED: 25Mar63

NO REF SOV: 000

ENCL: 01

OTHER: 000

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SUB CODE: EC

ATD PRESS: 4083

Card 2/3

L 65149-65
ACCESSION NR: AP5021571

ENCLOSURE: 01

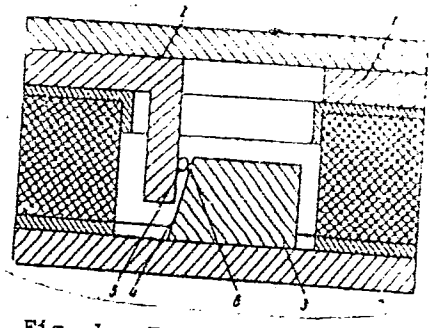


Fig. 1. Tunnel diode

1- Upper lead; 2- lug of upper lead; 3- crystal of semi-conducting material; 4- side face of crystal; 5- electrode material; 6- p-n junction.

Card 3/3

USSR/Cultivated Plants. Fruits. Berries. M

Abs Jour : Ref Zhur-Biol., No 15, 1958, 68361

Author : Konstantinov, P. K., Ol'khovskiy, M. K.
Inst : -
Title : The Best Strawberry Strains in Polesia and in the Ukrainian Wooded Steppe Zones.

Orig Pub : Sad i ogorod, 1957, No 2, 50-52

Abstract : The Culver strawberry strain occupies first place in terms of yields, fruit size, and taste qualities. The Koralka strain occupies second place, and constitutes the most valuable preserving kind. In Lugansk, Zhitomir, and Sumy Oblast's, the Mysovka strain is outstanding in terms of yields. Kiev Early No 2 is the earliest-ripening strain. It ripens 7-8 days earlier than the Roshchinskaya strain. In 1955,

Card : 1/2

KONSTANTINOV, P. N. Prof.

No.1, 1948 "One More Article Concerning the Organization of Testing Work," Sov. Agron.,

Active Member, All-Union Acad. Agr. Sci. im. Lenin

KONSTANTINOV, PETR NIKIFOROVICH

Agriculture

Principles of experimental work in agriculture, Moskva, Gos. izd-vo sel'khoz. lit-ry, 1952

Monthly List of Russian Accessions, Library of Congress, October 1952. UNCLASSIFIED.

1. KONSTANTINOV, P. N.

2. USSR (600)

4. Irrigation

7. Problems of watering and irrigation during the growing season. Gidr. i mel. 5 no. 2, 1953

9. **Monthly List of Russian Accessions**, Library of Congress, June 1953. Unclassified.

KONSTANTINOV, P. N.

6791. Konstantinov, P. N. Maslichnyye kul'tury v penzenskoy oblasti. Penza, Kn. izd., 1954. 80 s. s. ill. 20 sm. 3.000 ekz. 1 R. 5 K. - (55-2947) P 633.85 (47.398)

SO: Knizhnaya Letopis' No. 6, 1955

KONSTANTINOV, R.

Preliminary Pressed and Churned Oils (Ekible Salad Oils). Leka Promishlenost (Light Industry), #12:21:Dec. 1954

KONSTANTINOV, R.M.

Greisen type of stannic mineralization in exocontact granites and veins of eastern Transbaikalia. Trudy MGRI no.28:47-50 '55. (MLRA 8:6)
(Transbaikalia--Petrology)

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 5, p 58 (USSR) 15-57-5-6112

AUTHORS: Aristov, V. V., Stankeyev, Ye. A., Konstantinov, R. M.

TITLE: The Origin of Amazonite Granites in the Eastern Trans-Baikal Region (K voprosu o proiskhozhdenii amazonitovykh granitov v Vostochnom Zabaykal'ye)

PERIODICAL: Tr. Mosk. geol-razved. in-ta, Vol 29, pp 52-56, 1956

ABSTRACT: Several small masses of amazonite granites are known in the eastern trans-Baikal region. They are associated with specific rare-metal mineralization. A mass, forming a steeply dipping dike-like body (40° to 50°) was studied. The amazonite granites consist of microcline-amazonite (30 percent, occurring in grains of irregular outlines, and replaced by quartz), quartz (30 percent), albite

Card 1/3

APPROVED FOR RELEASE: 06/19/2000 CIA-RDP86-00513R000824410013-8

15-57-5-6112

The Origin of Amazonite Granites (Cont.)

and other minerals that contain rare and disseminated elements lead the authors to suggest that the amazon granites were formed by crystallization of a magma approximately the composition of pegmatite and derived from the differentiation of common biotite-granite magma. Rapid crystallization of the magma at low temperatures and pressures was responsible for the absence of secondary differentiation and for the elimination of the volatile constituents. These latter gave rise to greisenization of the host sand-silt rocks up to the final consolidation of the mass.

Card 3/3

O. V. B.

KONSTANTINOV, R.M.

Two types of cassiterite found in quartzitic feldspar veins in the Etykinskoye deposits of eastern Transbaikalia. Zap. Vses.min.ob-va 85 no.4:583-585 '56. (MLRA 10:2)

(Transbaikalia--Cassiterite)

KHETCHIKOV, L.N.; KONSTANTINOV, R.M.

Distribution of zinc, lead, and copper in enclosing rocks of tin deposits in the Far East. Geol. rud. mestorozh. no.4:127-133 Jl-Ag '59. (MIRA 13:1)

1.Dal'nevostochnyy filial Sibirskogo otdeleniya AN SSSR, Vladivostok i Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR, Moskva.
(Soviet Far East--Ore deposits)

KONSTANTINOV, R.M.

Some problems in studying the dynamics of hydrothermal solutions. Soob.DVFAN SSSR no.10:250-254 '59. (MIRA 13:11)

1. Dal'nevostochnyy politekhnicheskiy institut imeni V.V.Kuybysheva.
(Water, Underground)

KONSTANTINOV, R.M.; AKIMOVA, G.M.; KHETCHIKOV, L.N.; KOROSTELEV, P.G.

Zinc content of rocks from the Tetyukhe skarn-complex ore deposits. Soob.DVFAN SSSR no.10:262-264 '59. (MIRA 13:11)

1. Dal'nevostochnyy politekhnicheskiy institut im.V.V.Kuybysheva i Dal'nevostochny filial Sibirskogo otdeleniya AN SSSR.
(Zinc--Analysis) (Tetyukhe Valley--Ore deposits)

KONSTANTINOV, R.M.; KHETCHIKOV, L.N.; SKAKUNOV, V.N.

Organizing geochemical prospecting for complex ore deposits in the Maritime Territory. Soob.DVFAN SSSR no.12:3-8 '60. (MIRA 13:11)

1. Dal'nevostochnyy filial imeni V.L.Komarova Sibirskogo otdeleniya AN SSSR i Institut geologii rudnykh mestorozhdenii, petrografii, mineralogii i geokhimii AN SSSR.
(Maritime Territory--Geochemical prospecting)

TOMSON, I.N.; KONSTANTINOV, R.M.

Relationship between ore formations as revealed by certain regions in the Pacific ore belt. Geol.rud.mestorozh. no.4:61-70 Jl-Ag '61. (MIRA 14:10)

1. Institut geologii rudnykh mestorozhdenii, petrografii, mineralogii i geokhimii AN SSSR.
(Far East--Ore deposits)

KHETCHIKOV, L.M.; KONSTANTINOV, R.M.

Importance of the dispersion of primary halos of zink in prospecting for skarn-complex metal and tin-complex metal deposits in the Far East. Biul.nauch.-tekh.inform.VIMS no.1:3-5 '60. (MIRA 15:5)

1. Dal'nevostochnyy filial AN SSSR.
(Far East--Ore deposits)

BETEKHTIN, A.G.; VOL'FSON, F.I.; GENKIN, A.D.; DUBROVSKIY, V.N.; YEROFEYEV, B.N.; KONSTANTINOV, R.M.; MATERIKOV, M.P.; SOKOLOV, G.A.; STRAKHOV, N.M.; TATARINOV, P.M.; TOMSON, I.N.; SHADLUN, T.N.; SHATALOV, Ye.T.; SHIPULIN, F.K.

Oleg Dmitrievich Levitskii; obituary. Geol. rud. mestorozh. no.2: 3-6 Mr-Ap '61. (MIRA 14:5)
(Levitskii, Oleg Dmitrievich, 1909-1961)

LEVITSKIY, O.D. [deceased]; ARISTOV, V.V.; KONSTANTINOV, R.M.; STANKEYEV, Ye.A.; SOKOLOV, G.A., prof., otv.red.; ZNAMENSKAYA, N.V., red.izd-va; GUS'KOVA, O.M., tekhn.red.

[Etyka tin ore deposit in eastern Transbaikalia] Etykinskoe olovorudnoe mestorozhdenie Vostochnogo Zabaikal'ia. Moskva, 1963. 141 p. (Akademiia nauk SSSR. Institut geologii rudnykh mestorozhdenii, petrografii, mineralogii i geokhimii. Trudy, no.100) (MIRA 17:3)

1. Chlen-korrespondent AN SSSR (for Levitskiy).

TOMSON, I.N.; IVANOV, I.B.; KONSTANTINOV, R.M.; LOBANOVA, G.M.; POLYAKOVA, O.P.

Absolute age of Mesozoic magmatic complexes and ore formations in eastern Transbaikalia. Izv. AN SSSR. Ser. geol. 28 no.12:31-40 D'63. (MIRA 17:2)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR, Moskva.

TOMSON, I.N.; KONSTANTINOV, R.M.; POLYAKOVA, O.P.

Genetic series of ore formations in Transbaikalia. Geol rud. mestorozh. 6 no.2:38-51 Mr-Ap '64. (MIRA 17:6)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR, Moskva.

TOMSON, I.N.; KONSTANTINOV, R.M.; POLYAKOVA, O.P.; IVANOV, I.B.; YESIKOV, A.D.

Upper Mesozoic hydrothermal cycles in eastern Transbaikalia in light potassium-argon and lead-isotope dating. Izv. AN SSSR Ser. geol. 29 no.7:3-11 Jl '64 (MIRA 18:1)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR, Moskva.

KONSTANTINOV, R.M.; ZHARIKOV, V.A.; OMEL'YANENKO, B.I.; PETROVSKAYA, N.V.; SHATALOV, Ye.T.;

[Study of the characteristics of the distribution of mineralization in metallogenetic research on ore regions; basic principles of metallogenetic research and the compilation of metallogenetic and prognostic maps of ore deposits] Izuchenie zakonomernostei razmeshcheniia mineralizatsii pri metallogenicheskikh issledovaniiakh rudnykh raionov; osnovnye printsipy metallogenicheskikh issledovanii i sostavleniia metallogenicheskikh i prognoznykh kart rudnykh raionov. Moskva, Nedra, 1965. 302 p. (MIRA 18:7)

DUBROVSKIY, V.N.; KONSTANTINOV, R.M.

First Expanded Session of the Scientific Council on the Theory of the Formation and Distribution of Endogenetic Ore Deposits in Siberia and the Far East. Geol. rud. mestorozh. 6 no.5: 104-110 S-O '64. (MIRA 17:12)

DUBROVSKIY, V.N.; KONSTANTINOV, R.M.

In the meeting of the Department of the Geology of Endogene Ore Deposits of the Institute of the Geology of Ore Deposits, Petrology, Mineralogy, and Geochemistry of the Academy of Sciences of the U.S.S.R. Geol.rud.mestorozh. 7 no.4:102-104 Jl-Ag '65.

(MIRA 18:8)

YESIKOV, A.D.; TOMSON, I.N.; KONSTANTINOV, R.M.; POLYAKOVA, O.P.

Isotope composition of ore lead from various type deposits in eastern Transbaikalia. Geokhimiia no.7:791-800 Jl '65.
(MIRA 18:11)

1. Institut geologii rudnykh mestorozhdeniy, petrografii, mineralogii i geokhimii AN SSSR, Moskva. Submitted June 11, 1964.

KONSTANTINOV, S., podpolkovnik.

Equipment of troop transport trucks. Voen.vest. 36 no.3:86-89 Mr '56. (MLRA 9:8)

(Motor trucks, Military)

KONSTANTINOV, S., podpolkovnik.

Driving caterpillar tractors. Za rul. no.10:15-16 O '57. (MIRA 10:11)
(Caterpillar tractors)

KONSTANTINOV, S., glavnyy inzhener.

Letter to the editor. Izv.AN SSSR Otd.tekh.nauk no.5:779-780 My '53.
(MLRA 6:8)

1. Moskovskiy mashinostroitel'nyy zavod "Borets".
(Bearings (Machinery)) (D'iachkov, A.K.)

KONSTANTINOV, S., polkovnik

War doctrine of American imperialism. Komm.Vooruzh.Sil 3 no.23:79-85 D '62. (MIRA 16:2)
(United States--Military policy)

KONSTANTINOV, S.

The great council of active workers of the All-Union Chemical Society. NTO 6 no.2:12-13 F '64. (MIRA 17:4)

9(9)

AUTHORS: Shamayev, Yu.M., and Konstantinov, S.G. SOV/142-58-6-13/20

TITLE: Computation of the Relative Sensitivity of a Deflection System With Travelling Waves (Raschet otnositel'noy chuvstvitel'nosti otklonyayushchey sistemy s begushchey volnoy)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy - Radiotekhnika, 1958, Nr 6, pp 719-723 (USSR)

ABSTRACT: The article deals with the computation of the dynamic sensitivity of a deflection system with travelling waves (DSTW), in the form of a semi-circular ribbon system, under synchronous and asynchronous conditions of beam motion, without accounting for dispersion and reflection in the system. In oscillographs for use with VHF and short duration video-impulses, ordinary methods of extending the frequency range of the scope mechanism - e.g. shortening the deflection system and/or increasing the deflection voltage - are not adequate because they decrease the sensitivity of the deflection system.

Card 1/4

Computation of the Relative Sensitivity of a Deflection System With Travelling Waves

Several types of electron beam tubes with travelling waves have been developed, providing broader frequency coverage without loss of sensitivity (see Figure 1), and in which the deflection system is likened to a series of ordinary deflection plates with a short transit time, distributed along the electron beam axis, and connected one to another through a segment of a delay line. Delay time of the input signal wave in DSTW is selected equal to the transit time of an electron between neighboring pairs of deflection plates, which condition is met when the velocities of the electrons and wave (distributed along the deflection system) are equal. The resulting relative sensitivity is approximately equal to the sensitivity of one pair of plates multiplied by their number. The authors then compute the dynamic sensitivity of DSTW without accounting for the re-

Computation of the Relative Sensitivity of a Deflection System With Travelling Waves

flected wave, and on the assumption that electromagnetic wave dispersion is absent in the band of frequencies to be registered. A complex plane is used for visual representation of the process of interaction between the electron beam and the travelling wave field (Figure 2). The results of computations for an experimental tube with stated parameters are introduced by way of example. Checking of the formulae used was done with an experimental prototype travelling-wave tube produced by the Moscow Energetics Institute in 1953, using VHF frequencies. The influence of the accelerating voltage on the sensitivity of the tube at a frequency of 3128 mc for computed and experimental conditions are shown in the graph of figure 4. This article was recommended by the Kafedra teoreticheskikh osnov elektrotekhniki Moskovskogo

SOV/142-58-6-13/20

Computation of the Relative Sensitivity of a Deflection System With Travelling Waves

ordena Lenina energeticheskogo instituta (Chair of the Theoretical Bases of Electrical Engineering of the Moscow Order of Lenin Power Institute). There are 2 diagrams, 2 graphs, and 16 references, 5 of which are Soviet, 8 English, 1 German, and 2 French.

SUBMITTED: June 16, 1958

Card 4/4

KONSTANTINOV, S. G.

М. А. [illegible]

[illegible] электромагнитных волн.

10 июня

(с 18 до 22 часов)

[illegible]

Р. А. [illegible]

Замедляющая система в виде [illegible] для ЛБВ.

С. Г. Константинов

[illegible] система с бегущей волной.

[illegible]

Исследование электронных волн в пространстве взаимодействия приборов СВЧ с помощью автомата для построения траекторий заряженных частиц.

Г. А. [illegible]

[illegible]

Замедляющая цепь типа фильтра для ламп с бегущей волной дециметрового диапазона.

11 июня

(с 10 до 16 часов)

Совместное заседание с секцией ферритовые устройства СВЧ

В. Н. Зубков, [illegible]

Некоторые вопросы теории параметрических усилителей.

[illegible]

К теории ферритового усилителя.

[illegible]

Ю. Т. [illegible]

[illegible]

Экспериментальные исследования ферритового усилителя

А. Л. [illegible]

[illegible]

Некоторые результаты исследования ферритовых усилителей.

А. С. [illegible]

К теории параметрического усиления в [illegible] системах.

report submitted for the Centennial Meeting of the Scientific Technological Society of Radio Engineering and Electrical Communications im. A. S. Popov (VNORiE), Moscow, 8-12 June. 1959

KONSTANTINOV, S.I.; GRISHAYEV, V.D., starshiy inzh.

Brigade of communist labor serving electric interlocking systems.
Avtom.telem.u sviaz' 4 no.8:23-25 Ag '60. (MIRA 13:8)

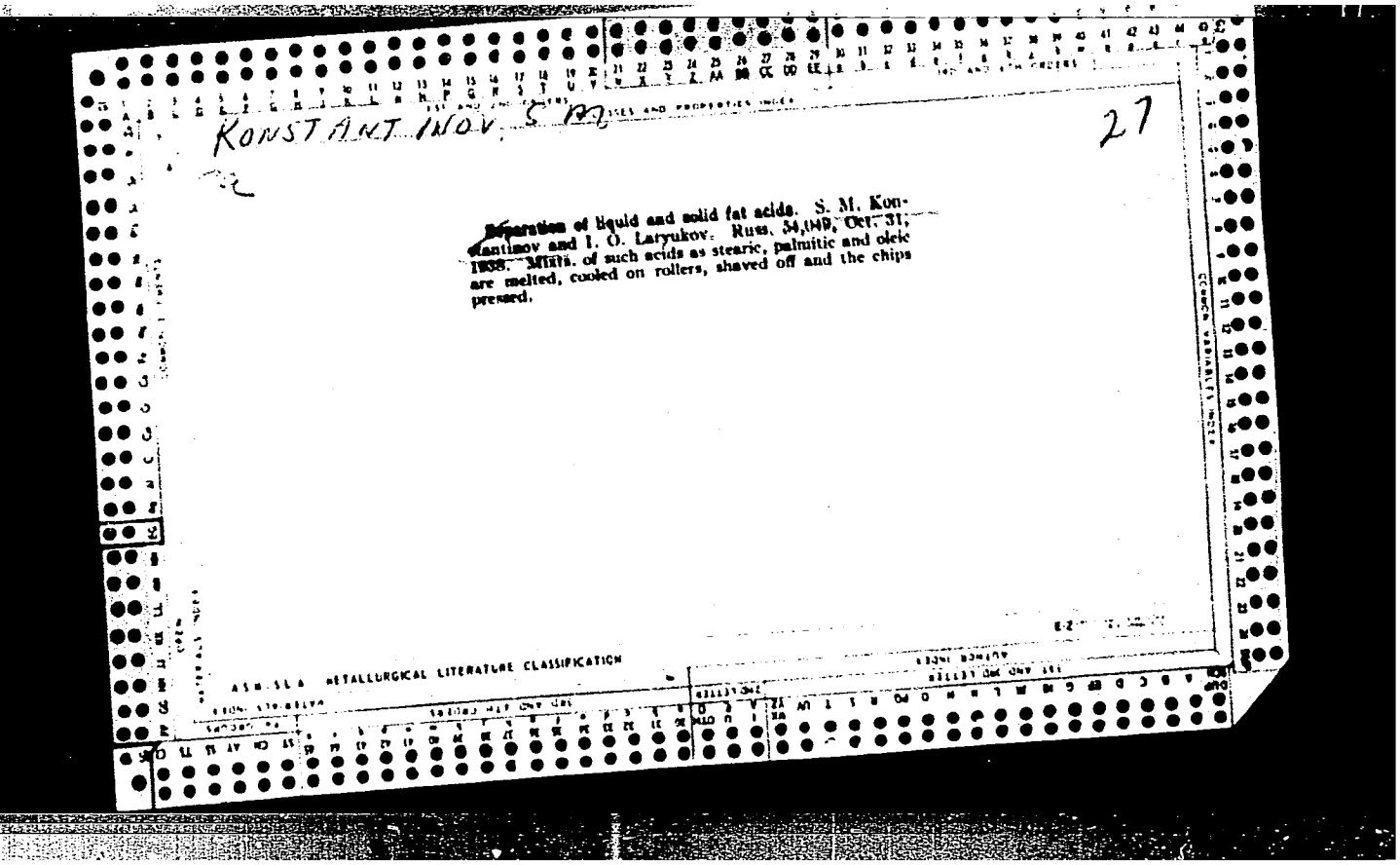
1. Nachal'nik otdela signalizatsii, tsentralizatsii i blokirovki sluzhby signalizatsii i svyazi Donetskoy dorogi (for Konstantinov).
2. Otdel signalizatsii, tsentralizatsii i blokirovki sluzhby signalizatsii i svyazi Donetskoy dorogi (for Grishayev).
(Railroads--Signaling--Interlocking systems)
(Railroads--Employees)

KONSTANTINOV, Semen Ivanovich; CHUZHOVA, A.P., red.

[Viticulture in Astrakhan Province] Vozdelyvanie vinograda v Astrakhanskoi oblasti. Astrakhan', Volga, 1962. 68 p. (MIRA 18:3)

ARESHKIN, Grigoriy Ivanovich; GORYACHEV, Vladimir Trifonovich; YEVTYUKHIN, Ivan Yegorovich; KONSTANTINOV, Sergey Leonidovich; LAVROV, Oleg Mikhaylovich; PERLIN, Vladimir Sergeyevich; SEREBRYAKOV, Yuriy Fedorovich; KOSOROTOV, B.V., inzh.-polkovnik zapasa, red.; ZUDINA, M.P., tekhn. red.

[Training manual for motor vehicle drivers] Posobie dlia podgotovki voditelia avtomobilia. Moskva, Voen.izd-vo M-va obor. SSSR, 1962. 501 p. (MIRA 15:4)
(Automobile drivers) (Vehicles, Military)

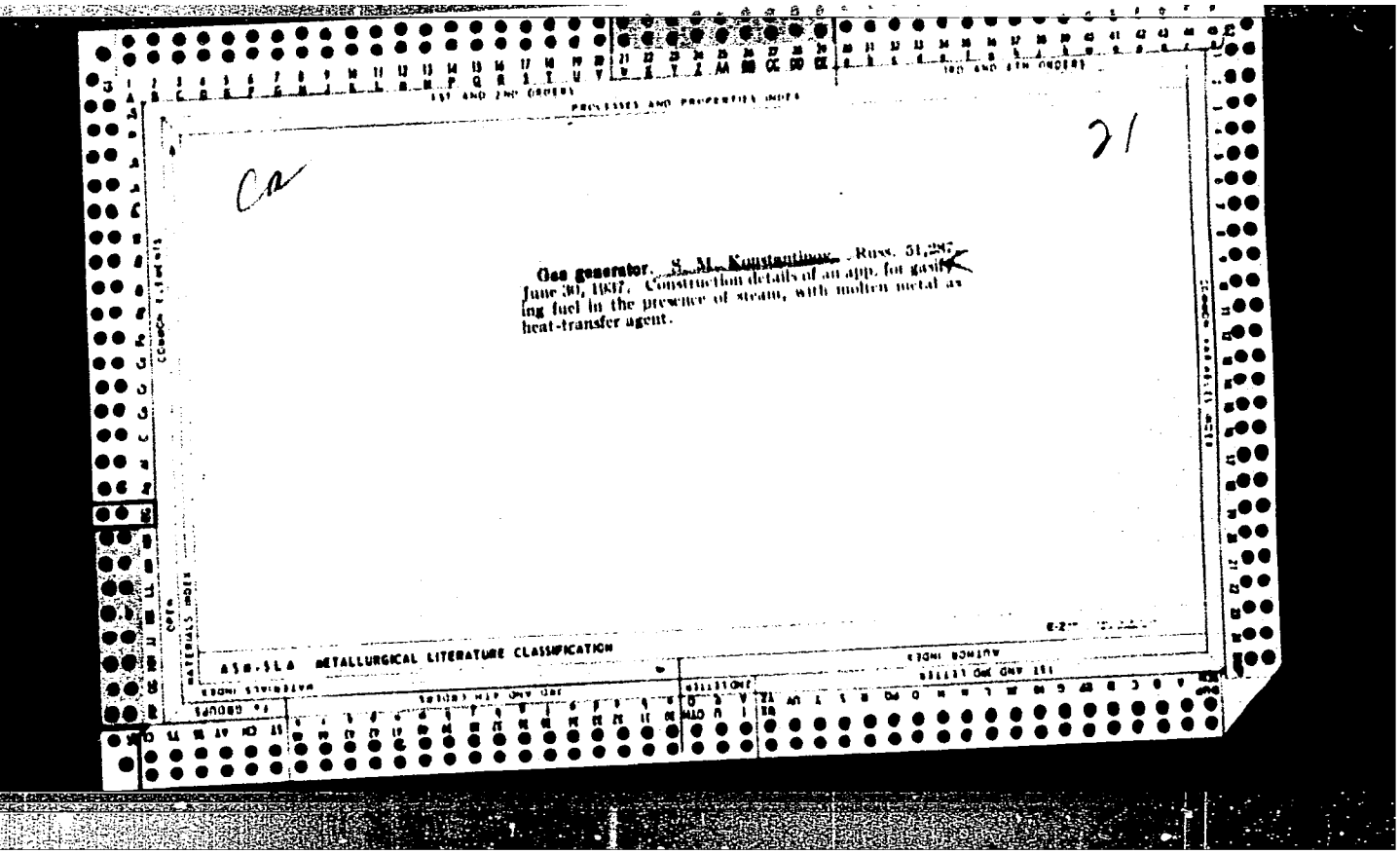


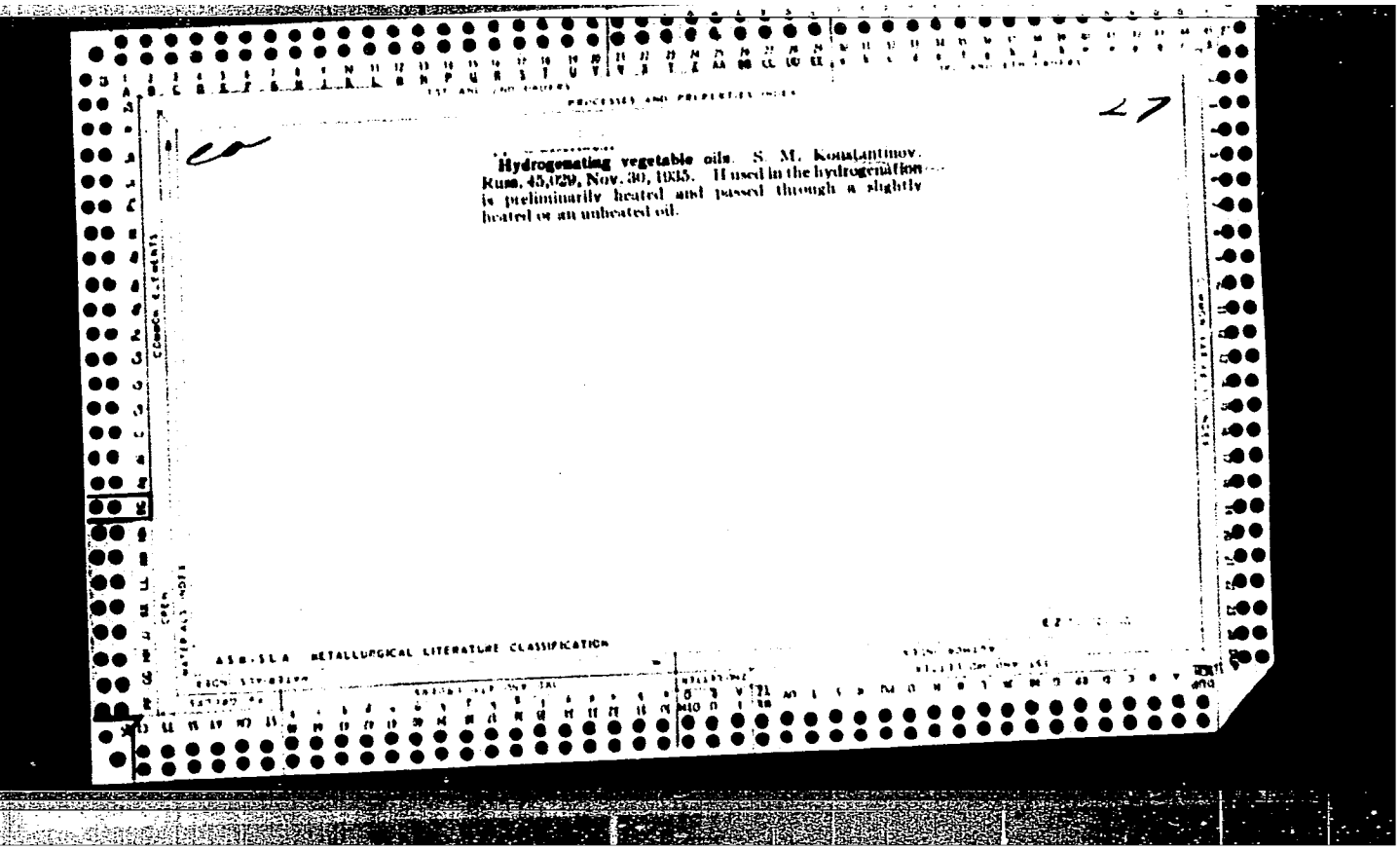
KONSTANTINOV, S. M.

27

Separation of liquid and solid fat acids. S. M. Konstantinov and I. O. Laryukov. Russ. 54,149, Oct. 31, 1938. Mixts. of such acids as stearic, palmitic and oleic are melted, cooled on rollers, shaved off and the chips pressed.

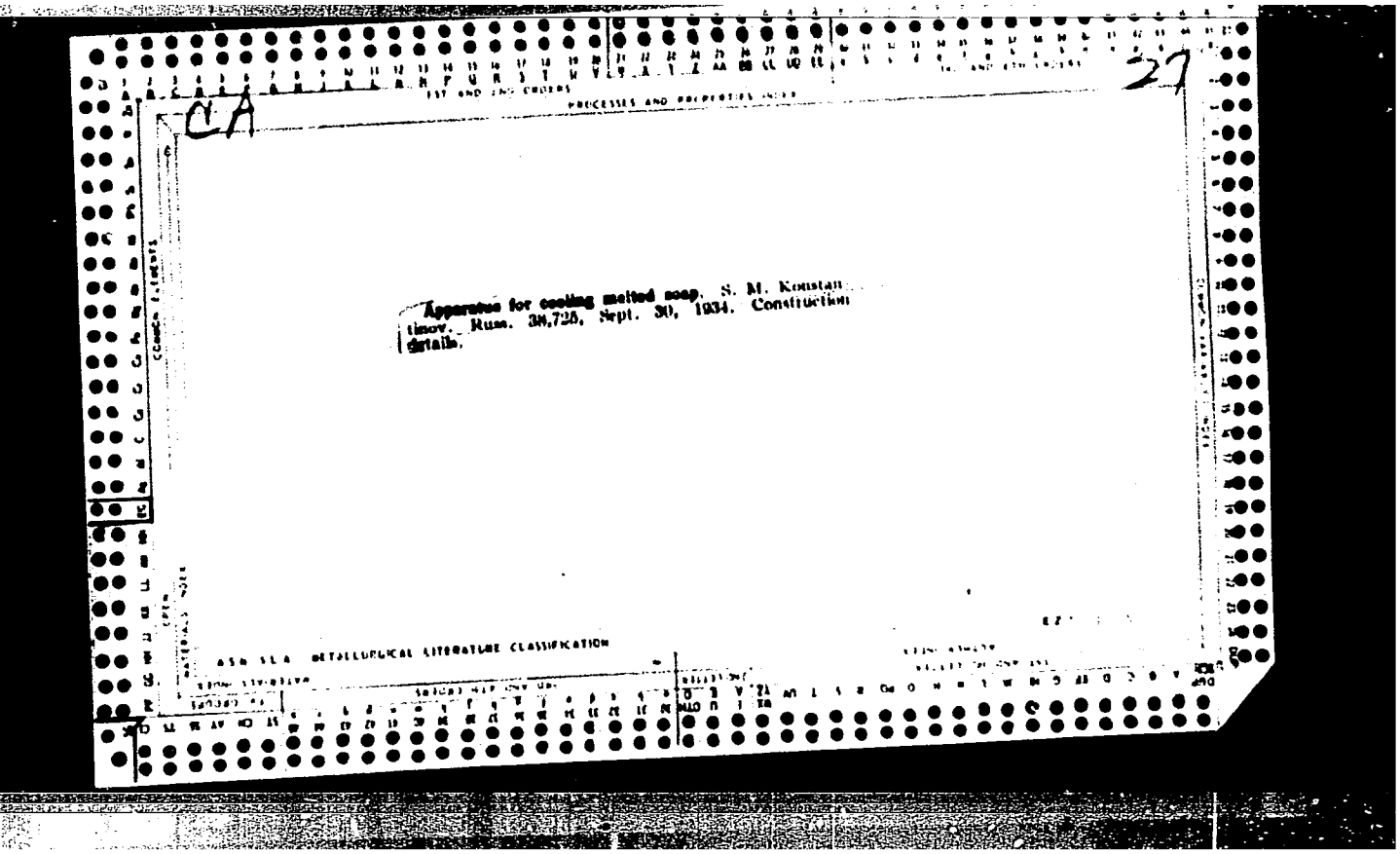
ASTM-SLA METALLURGICAL LITERATURE CLASSIFICATION





Hydrogenating vegetable oils. S. M. Konstantinov. Russ. 45,029, Nov. 30, 1935. Used in the hydrogenation is preliminarily heated and passed through a slightly heated or an unheated oil.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION



CA

27

Apparatus for cooling melted soap. S. M. Koustan tinov. Russ. 38,725, Sept. 30, 1934. Construction details.

ASM SLA METALLURGICAL LITERATURE CLASSIFICATION

KONSTANTINOV, S.M.

Investigating the heat capacity of molasses waste. Izv.vys.ucheb. zav.; pishch.tekh. no.1:94-98 '60. (MIRA 13:6)

1. Kafedra teploenergetiki Kiyevskogo tekhnologicheskogo instituta pishchevoy promyshlennosti.
(Molasses) (Heat capacity)

POPOV, V.D.; KONSTANTINOV, S.M.

Viscosity and specific gravity of molasses waste. Spirt. prom. 26 no.1:27-30 '60. (MIRA 13:6)
(Molasses)

KONSTANTINOV, S.M.

Thermal conductivity of molasses waste. Spirt.prom. 26 no.3:13-14 '60. (MIRA 13:10)
(Distilling industries--By-products)

KONSTANTINOV, S.M.; TOBIIEVICH, N.Yu.

Heat transfer during the evaporation of molasses waste. Spirt. prom. 27 no.1:28-31 '61. (MIRA 14:2)
(Molasses) (Heat—Transmission)

KONSTANTINOV, S.M.

Experimental investigation of the surface tension of molasses waste. Izv. vys. ucheb. zav.;pishch. tekh. no.3:130-131 '60. (MIRA 14:8)

1. Kiyevskiy tekhnologicheskiy institut pishchevoy promyshlennosti, Kafedra teploenergetiki.
(Molasses) (Surface tension)

KONSTANTINOV, S.M.

Studying heat transfer to boiling molasses' distillery wastes in a circuit with natural circulation. Izv.vys.ucheb.zav.; pishch. tekh. no.3:87-91 '62. (MIRA 15:7)

1. Kiyevskiy tekhnologicheskiy institut pishchevoy promyshlennosti, kafedra teploenergetiki.
(Heat—Transmission) (Distilling industries)

POPOV, V.D., doktor tekhn.nauk, prof.; KONSTANTINOV, S.M., inzh.

Generalization on some experimental data on heat transfer during the boiling of some liquids and aqueous solutions. Izv. vys. ucheb. zav.; energ. 5 no.7:70-78 Jl '62. (MIRA 15:7)

1. Kiyevskiy tekhnologicheskiy institut pishchevoy promyshlennosti. Predstavlena kafedroy teploenergetiki.
(Heat—Transmission)

POPOV, V.D.; KONSTANTINOV, S.M.; DEMCHUK, G.S.

Results of the thermal testing of the evaopration station for vinasse. Trudy KTIPP no.25:9-12 '62. (MIRA 16:5)
(Evaporating appliances—Testing)

KONSTANTINOV, S.M.

Studying heat exchange in the boiling of vinasse. Trudy KTIPP no.25:83-87 '62. (MIRA 16:5)
(Evaporating appliances) (Heat—Transmission)
(Molasses)